

REMARKS

After entry of this amendment, claims 1-18 are pending in this application. Claims 14-18 have been added. Reconsideration of the application as amended is requested.

In the Office Action dated July 19, 2002, the Examiner indicates that one instance of Figure 2 should be removed since Figure 2 appears on both the first and second pages of the drawings. A Request for Drawing Change Approval, pursuant to M.P.E.P. § 608.02(t), is submitted with this Communication to cancel sheet 2 of the drawings. It is submitted that the cancellation of sheet 2 of the drawings overcomes the problem identified by the Examiner and places the application in suitable condition for allowance.

Claims 1-6 and 8-10 stand rejected under 35 U.S.C. § 102(b) as being unpatentable in view of Nakamura, et al., U.S. Patent No. 4,636,643. It is submitted that Nakamura, et al., does not teach or suggest the invention as recited in claim 1. In particular, Nakamura, et al., does not teach or suggest a control unit that manages the radiation source and analyzes the rays received by the photodetector. The emitting control circuit 7 of Nakamura, et al., controls the infrared emitting means 1, but does not analyze the rays received by the detector 9. Similarly, control unit 10 analyzes the rays received by the detector 9, but does not manage the infrared emitting means 1. In Figure 2 of Nakamura, et al., the emitting control 7 and the control unit 10 are shown as distinct controllers. It is therefore submitted that claim 1 patentably defines over Nakamura, et al., and is in suitable condition for allowance. Claims 2-6 and 8-10 depend from claim 1 and are therefore also in suitable condition for allowance.

Claims 1-6, 8-10 and 12 stand rejected under 35 U.S.C. § 102(e) as being unpatentable over Stam, et al., U.S. Patent No. 5,923,027. It is submitted that Stam, et al., does not teach or suggest the invention as recited in claim 1. In particular, Stam, et al., does not teach a control unit that manages the radiation source and analyzes the rays received by the photodetector. Figure 6 of Stam, et al., shows timing and control circuitry 37 in communication with a microcontroller 38. The timing and control circuitry 37 is associated with the image array sensor 32 and is not shown in electrical communication with the LED 66. It is therefore submitted that

claim 1 patentably defines over Stam, et al., and is in suitable condition for allowance. Claims 2-6, 8-10 and 12 depend from claim 1 and are therefore also in suitable condition for allowance.

Claims 7 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Stam, et al. Claims 7 and 11 depend from claim 1 and are therefore in suitable condition for allowance since, as stated above, Stam, et al., does not teach or suggest the invention recited in claim 1. With respect to claim 11, the Examiner states that it would have been obvious to one of ordinary skill in the art at the time that the invention was made to integrate the device with the interior light module as the interior light module is another location in a vehicle with direct visual access to the windshield in the area of the field of vision and out of the field of vision of the driver of the vehicle.

However, it is submitted that Stam, et al., does not teach or suggest the invention as recited in claim 11. To establish a prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. M.P.E.P. § 2143.03. As acknowledged by the Examiner, Stam, et al., does not teach or suggest a device integral with an interior light module of a vehicle. Therefore, it is submitted that the rejection of claim 11 is unsupported.

If the Examiner is relying on common knowledge or "well-known" prior art, the Applicant traverses such an assertion and requests that the Examiner cite a reference in support of his position pursuant to M.P.E.P. § 2144.03. Since the art does not teach or suggest all the claim limitations, it is submitted that claim 11 patentably defines over Stam, et al., and is in suitable condition for allowance in addition to being allowable by dependency from claim 1.

Claim 13 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Stam, et al., in view of Hegyi, U.S. Patent No. 5,703,568. It is submitted that neither Stam, et al., nor Hegyi, taken singularly or in any permissible combination, teach or suggest the invention as recited in claim 13. As stated above, Stam, et al., does not teach or suggest a control unit that manages the radiation source and analyzes the rays received by the photodetector. Hegyi does not overcome this deficiency. In Figure 2 of Hegyi, the LED array 32 is shown coupled to an LED

driver 31. The photodiode 12 is shown to be isolated from the LED driver 31. It is therefore submitted that claim 1 patentably defines over the references and is in suitable condition for allowance. Claim 13 depends from claim 1 and is therefore also in suitable condition for allowance.

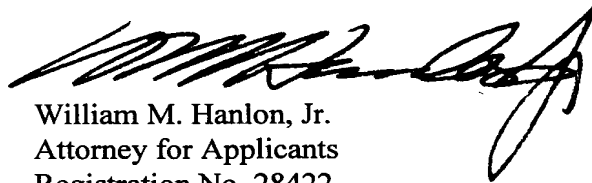
New claim 14 - 18 have been added in this Communication. Claims 14-18 are allowable by dependency from allowable claim 1. The subject matter of claim 14 was previously disclosed in paragraph [0015] of the specification. The subject matter of claim 15 was disclosed in paragraph [0012] of the specification. The subject matter of claims 16-17 was previously disclosed in paragraph [0016] of the specification. The subject matter of claim 18 was previously disclosed in paragraph [0018] of the specification. The Examiner's consideration of new claims 14-18 is requested.

It is respectfully submitted that this Amendment traverses and overcomes all of the Examiner's objections and rejections to the application as originally filed. It is further submitted that this Amendment has antecedent basis in the application as originally filed, including the specification, claims and drawings, and that this Amendment does not add any new subject matter to the application. Reconsideration of the application as amended is requested. It is respectfully submitted that this Amendment places the application in suitable condition for allowance; notice of which is requested.

If the Examiner feels that prosecution of the present application can be expedited by way of an Examiner's amendment, the Examiner is invited to contact the Applicant's attorney at the telephone number listed below.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read 'William M. Hanlon, Jr.', is positioned above the typed name.

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the specification:

Replace paragraph 0025 with:

In Figure 1 the device of the invention is identified in its entirety with the reference numeral 1. The device 1 is used to detect particles 2 on a windshield 3 of a motor vehicle 10 (see Fig. 2). The device 1 possesses a radiation source 4 which emits optical rays 5 onto the windshield 3. The radiation source 4 is formed as a light-emitting diode (LED). In addition, the device 1 possesses a photodetector 6 which receives the optical rays 7 reflected from the particles 2 on the windshield 3. The photodetector 6 is designed as a charge-coupled device (CCD) image converter. Finally, the device 1 possesses a control unit 8 which manages the radiation source 4 by means of control signals [9] and which analyzes the optical rays 7 received by the photodetector 6. Means 12 for focusing the optical rays 5, 7 are located in the direction of propagation of the beams 5 after the radiation source 4 and in the direction of propagation of the beams 7 in front of the photodetector 6. The means 12 for focusing the beams 5, 7 are formed as lenses. The device 1 according to the invention is connected over a bidirectional data bus 9 to a superordinate control unit (not shown) in the vehicle 10.

In the claims:

New claims 14 - 18 have been added.